

2018

# Astronomy 100: Exploring the Universe

Alexandra Pope

*University of Massachusetts Amherst*, [pope@astro.umass.edu](mailto:pope@astro.umass.edu)

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# Syllabus - Astronomy 100: Exploring the Universe - Fall 2018

**Time:** Tues/Thurs 1:00-2:15

**Room:** Hasbrouck 20

**All course inquiries:** [astro100.umass@gmail.com](mailto:astro100.umass@gmail.com)

**Course website on Moodle**

**Instructor:** Professor Alexandra Pope, LGRT 620  
Office hours: Thursday 9-10:30am (or by appointment)

**Teaching Assistants:** Alyssa Sokol, LGRT 623, Office hours: Wednesday 3-4pm  
Yvonne Ban, LGRT 532A, Office hours: Monday 11am-noon

**Astronomy Helpdesk:** MTuWTh 7-9pm Hasbrouck 110 [*to be confirmed*]

## Course purpose/philosophy:

For nonscience majors. According to the UMass General Education Council, "the purpose of the General Education requirement is to stretch students' minds, broaden their experiences, sharpen their critical thinking and evaluation skills, and make connections through shared experiences." In this course, we will examine the power and limitations of scientific investigation. We will consider some of the fundamental questions addressed by astronomy and learn how the physical sciences can address these questions. While most of the objects astronomers study are remote, many provide new perspectives on the Earth, and the methods we use can be applied to many "real world" problems. Finally, we will explore what we know and don't know about the Universe and its constituent parts, and how we have reached those conclusions. In this context, students will be required to think about and solve conceptual and quantitative problems of astronomy and physics, including some moderately challenging topics. This will involve some use of algebra and geometry.

## Required electronic textbook and supporting material:

We will be using the **free** Openstax Astronomy textbook and the platform Perusall to do readings. There is a link to the textbook in Perusall at the top of the course Moodle site.

**Lab component:** This is organized and run independently of the lecture. Please refer to your lab instructors with lab-related questions.

<b>Lecture grade:</b>	In-class activities	20%
	Assignments	20%
	Midterms (3)*	20% each
	Final exam*	20%

\* I will count only your highest 3 exam scores towards your final grade.



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**Final Astro100 grade** =  $0.75 * (\text{lecture\_grade}) + 0.25 * (\text{lab\_grade})$

A	A-	B+	B	B-	C+	C	C-	D+	D
92-100	88-91	85-88	82-84	78-81	75-77	72-74	68-71	65-67	60-64

### **Extra credit:**

Perusall readings (up to 10%): reading and making thoughtful comments about the course material in Perusall. In order to get full points, you must contribute at least 5 comments/questions to each reading. Reading assignments should be completed in Perusall BEFORE the deadline listed in Perusall.

### **Course policies**

**Reading the text is WILL HELP YOU SUCCEED:** up to 10% of extra credit comes from reading and commenting on the text in Perusall. The lecture time is focused only on the more difficult concepts and it is your responsibility to cover and understand the other material in the text. If you need more help on some topics, please come to office hours (myself or the TA) or visit the astronomy helpdesk.

**Lecture notes:** I will post the lecture notes in *Moodle* following the lecture.

**Flash cards:** We will be using flash cards for interactive lectures. Please bring your flash cards to every class. If you lose your sheet, you may print out another one from *Moodle*.

**Late policy:** All activities and exams must take place on the day they are due/scheduled. I will allow 3 missed in-class activities and 1 missed exam during the semester so there will be no need for make-ups.

**Computers/tablets:** Many students find it useful to follow along with the notes or ebook using their mobile devices. If you are using your computer/device for other purposes please sit in the last few rows so as not to disrupt other students. The TA will sit at the back and may ask you to move or leave if you are being disruptive to others.

**Cell phones:** Please be considerate to your fellow classmates and do not text or use your phone during class. I understand that emergencies may arise. In that case, please keep your phones on mute and step out into the hall if you receive an urgent call.

**Cheating:** Cheating is a serious offense at the University and will not be tolerated. *Quizzes* will be randomized so that there is no benefit to viewing someone else's answers. Perusall has the ability to detect plagiarized comments. We will follow the University policies if cheating is suspected.

**In-class recordings:** It is illegal to buy or sell lecture notes or video/audio recordings of lectures.



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